

REMARKS

This amendment is responsive to the office action dated April 5, 2006.

Claims 1-52 were pending in the application. Claims 1-10, 20-26, 28-31, 39-42 and 44-52 were rejected. Claims 11-19, 27, 32-38 and 43 were determined allowable but were objected to.

By way of this amendment, the Applicant has canceled claims 4-6, 29-30 and 48-52. Claims 1, 11, 18, 20, 28, 43 and 46 have been amended. Claims 2, 3, 7-10, 12-17, 19, 21-27, 31-42, 44-45 and 47 remain unchanged.

Accordingly, Claims 1-3, 7-18 and 31-47 are currently pending.

I. OBJECTION TO CLAIMS:

Claim 43 was objected to because the word relatively was misspelled. The Applicant has corrected this misspelling by amending Claim 43. Withdrawal of this objection is respectfully requested.

II. REJECTION OF CLAIMS UNDER 35 USC 112

Claims 20 and 21 were rejected under 35 USC 112, second paragraph because the term "the high speed parameters of the laser diode driver" in Claim 20 lacked proper antecedent basis. The Applicant has amended Claim 20 to correct the antecedent basis. Withdrawal of this rejection is respectfully requested.

III. REJECTION OF CLAIMS UNDER 35 USC 102

Claims 1, 2, 4, 7, 26, 28 and 31 were rejected under 35 USC 102(b), as being anticipated by US Patent No. 5,900,959 (Noda et al.). The basis for the Examiner's rejection was set forth in the Office Action at pages 3-5. The Applicant has amended claims 1 and 28 of the present application to require that the device include a power splitter that splits the transmitted data signal into a first and second low powered signal and a third high powered signal. Further, the claims have been amended to require that the first low powered signal be read by a first detector to determine its high frequency characteristics and that the second low powered signal be read by a second detector to determine its source parameters.

In contrast, the device in Noda does not describe a power splitter for generating two low powered signals that are each in turn read to determine a high frequency characteristic and a source parameter related to the data signal. Element 30 is not a power splitter but an optical coupler that captures a reflection from the front of the incoming data signal from the front and rear of the laser diode (28) this signal from the front (Pf) provides a power reading on the front of the transmitter while the signal from the back (Pb) provides a power reading on the rear of the transmitter. These two power readings are then transmitted via photo diodes (26 and 26') to a divider where the signals are combined to form a ratio Pf/Pb , a single signal that is passed to the control circuit which is in turn used then to increase or decrease the transmitter drive power.

There is no disclosure within Noda that describes the use of a power splitter. Further there is no disclosure in Noda that is directed to the generation of two low powered data signals, one corresponding to high frequency characteristics of the signal and the second corresponding to source parameters of the data signal. Finally there is no disclosure in Noda that provides for the two low powered signals to be passed separately to the control circuit wherein they are each used separately to make a control decision.

Since claims 1 and 28 of the present invention, as amended, include disclosure that is not found in the cited Noda reference this rejection is no longer believed to be applicable. Further, since claims 2, 4, 7, 26 and 31 are dependant on now allowable Claims 1 and 28, these claims are also believed to be allowable. Accordingly, withdrawal of this rejection is respectfully requested.

IV. REJECTION OF CLAIMS UNDER 35 USC 102

Claims 1, 2, 4, 6, 7, 22-25, 28, 30, 31 and 52 were rejected under 35 USC 102(e), as being anticipated by US Patent No. 6,842,587 (McGhan et al.). The basis for the Examiner's rejection was set forth in the Office Action at pages 5-8. Claims 30 and 52 have been canceled rendering this rejection moot with respect to these claims. In addition, the Applicant has amended claims 1 and 28 of the present application to

require that the device include a power splitter that splits the transmitted data signal into a first and second low powered signal and a third high powered signal. Further, the claims have been amended to require that the first low powered signal be read by a first detector to determine its high frequency characteristics and that the second low powered signal be read by a second detector to determine its source parameters.

In contrast, the device in McGhan does not describe a power splitter for generating two low powered signals that are each in turn read to determine a high frequency characteristic and a source parameter related to the data signal. The disclosure clearly states that a tap coupler (beam splitter) is used to tap off a portion of the power output power to a single PIN power monitor. Element 30 is not a power splitter but an optical coupler that captures a reflection from the front of the incoming data signal and provides a power reading to the photo diode. There is only a single reading related to the power of the signal in the McGhan disclosure.

There is no disclosure within McGhan that describes the use of a power splitter to generate three separate signal streams. Further there is no disclosure in McGhan that is directed to the generation of two low powered data signals, one corresponding to high frequency characteristics of the signal and the second corresponding to source parameters of the data signal. Finally there is no disclosure in McGhan that provides for the two low powered signals to be passed separately to the control circuit wherein they are each used separately to make a control decision.

Since claims 1 and 28 of the present invention, as amended, include disclosure that is not found in the cited McGhan reference this rejection is no longer believed to be applicable. Further, since claims 2, 4, 6, 7, 22-25, 28 and 31 are dependant on now allowable Claims 1 and 28, these claims are also believed to be allowable. Accordingly, withdrawal of this rejection is respectfully requested.

V. REJECTION OF CLAIMS UNDER 35 USC 102

Claims 1, 2, 4-7, 28-31, 39, 41, 44, 45 and 48-52 were rejected under 35 USC 102(e), as being anticipated by US Patent No. 6,445,471 (Shimokawa et al.). The basis

for the Examiner's rejection was set forth in the Office Action at pages 10-12. Claims 4-6, 29, 30 and 48-52 have been canceled rendering this rejection moot with respect to these claims. In addition, the Applicant has amended claims 1 and 28 of the present application to require that the device include a power splitter that splits the transmitted data signal into a first and second low powered signal and a third high powered signal. Further, the claims have been amended to require that the first low powered signal be read by a first detector to determine its high frequency characteristics and that the second low powered signal be read by a second detector to determine its source parameters.

In contrast, the device in Shimokawa does not describe a single power splitter for generating two low powered signals that are each in turn read to determine a high frequency characteristic and a source parameter related to the data signal. The disclosure clearly provides for two different power splitters at two different locations to determine the strength of the optical signal before and after amplification. This is clear as photodiode 110 is coupled into the signal pre amplification and photodiode 112 is coupled to the signal after amplification and muxing of the signal 109. Accordingly, there is only a single reading at each of two different locations related to the power of the signal.

There is no disclosure within Shimokawa that describes the use of a single power splitter to generate three separate signal streams. Further, there is no disclosure in Shimokawa that is directed to the generation of two low powered data signals, one corresponding to high frequency characteristics of the signal and the second corresponding to source parameters of the data signal.

Since the independent claims of the present invention, as amended, include disclosure that is not found in the cited Shimokawa reference this rejection is no longer believed to be applicable. Further, since the remaining claims are dependant on the now allowable independent claims, these claims are also believed to be allowable. Accordingly, withdrawal of this rejection is respectfully requested.

VI. REJECTION OF CLAIMS UNDER 35 USC 103

Claim 3 was rejected under 35 USC 103(a) as being unpatentable over McGhan in view of US Patent No. 6,021,947 (Swartz). The Examiner has stated that although McGhan does not demonstrate the use of a common semiconductor substrate, Swartz provides such a teaching and that the present invention is obvious in light of the combination of these references.

However, as was stated above with respect to McGhan alone, the base reference is lacking in a teaching that describes the use of a power splitter to generate three separate signal streams. Further there is no disclosure in McGhan that is directed to the generation of two low powered data signals, one corresponding to high frequency characteristics of the signal and the second corresponding to source parameters of the data signal. Finally there is no disclosure in McGhan that provides for the two low powered signals to be passed separately to the control circuit wherein they are each used separately to make a control decision.

The simple addition of Swartz does not overcome the missing teachings of the base McGhan reference. Accordingly, withdrawal of this rejection is respectfully requested.

VII. REJECTION OF CLAIMS UNDER 35 USC 103

Claims 8-10 were was rejected under 35 USC 103(a) as being unpatentable over Shimokawa. The Examiner has stated that although Shimokawa does not demonstrate the use of a high bandwidth and low noise characteristic sensor, the use of such devices in these application sis well known and that the present invention is obvious in light of the combination of these references.

However, as was stated above with respect to Shimokawa alone, the base reference is lacking in a teaching that describes that describes the use of a single power splitter to generate three separate signal streams. Further, there is no disclosure in Shimokawa that is directed to the generation of two low powered data signals, one corresponding to high frequency characteristics of the signal and the second

corresponding to source parameters of the data signal. Accordingly, withdrawal of this rejection is respectfully requested.

VII. REJECTION OF CLAIMS UNDER 35 USC 103

Claims 40, 42 and 51 were rejected under 35 USC 103(a) as being unpatentable over Shimokawa in view of US Patent No 5, 546,325 (Aulet). The Examiner has stated that although Shimokawa does not demonstrate the use of spec compliant testing and various high frequency characteristics, such disclosure is provided in Aulet that the present invention is obvious in light of the combination of these references.

However, as was stated above with respect to Shimokawa alone, the base reference is lacking in a teaching that describes that describes the use of a single power splitter to generate three separate signal streams. Further, there is no disclosure in Shimokawa that is directed to the generation of two low powered data signals, one corresponding to high frequency characteristics of the signal and the second corresponding to source parameters of the data signal. Accordingly, withdrawal of this rejection is respectfully requested.

VIII. REJECTION OF CLAIMS UNDER 35 USC 103

Claims 46 and 47 were rejected under 35 USC 103(a) as being unpatentable over Shimokawa in view of US Patent No 5,894,362 (Onaka). The Examiner has stated that although Shimokawa does not demonstrate the use of a plurality of sensors in a first and second array, such disclosure is provided in Onaka and that the present invention is obvious in light of the combination of these references.

However, as was stated above with respect to Shimokawa alone, the base reference is lacking in a teaching that describes that describes the use of a single power splitter to generate three separate signal streams. Further, there is no disclosure in Shimokawa that is directed to the generation of two low powered data signals, one corresponding to high frequency characteristics of the signal and the second

corresponding to source parameters of the data signal. Accordingly, withdrawal of this rejection is respectfully requested.

IX. ALLOWABLE SUBJECT MATTER

The Examiner indicated that Claims 11-19, 27, 32-38 and 43 were allowable but objected to as being dependent on rejected base claims. Claims 11 and 18 have been amended into independent format and include all of the limitations in their original base claims and intervening claims. Based on these amendments, Claims 11-19 are considered allowable.

Further, allowable claims 20 and 21 have been amended to overcome the §112 rejection and are also believed to be allowable.

X. CONCLUSION

Accordingly, Claims 1-3, 7-18 and 31-47 are believed to be in condition for allowance and the application ready for issue.

Corresponding action is respectfully solicited.

PTO is authorized to charge any additional fees incurred as a result of the filing hereof or credit any overpayment to our account #02-0900.

Respectfully submitted,

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